

REMARKS

This Response and Amendment is filed in response to the Office Action dated January 13, 2005. Claims 41-57 and 59 are pending in this application. Claim 52 is rejected under 35 U.S.C. §112, second paragraph as being indefinite. Applicant has amended claim 52 to overcome this rejection. Accordingly, withdrawal of the rejection under § 112 is respectfully requested.

The specification is objected to for failing to provide proper antecedent basis for the “mesio-distal axis” set forth in claim 48. Applicant respectfully requests that this objection be withdrawn. In the specification, Applicant teaches that “[A]n archwire slot 120 extends mesiodistally across the body 112 and between the gingival and occlusal tie wings located at opposed mesial and distal sides of the body and opens labially to receive an archwire 122.” Further, at least Figures 6-10 illustrate an archwire slot that extends between the mesial and distal sides of the bracket body. Therefore, the specification implicitly defines a “mesio-distal axis” as an axis that extends between opposed mesial and distal sides of the bracket body (i.e., mesiodistally), such as along the axis that the archwire slot extends. It is also noted that one skilled in the art fully understands the phrase mesio-distal to mean a line extending in the mesial and distal directions. Accordingly, withdrawal of the objection to the specification is respectfully requested.

Obviousness-Type Double Patenting Rejections

Claims 41-57 and 59 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of U.S. Patent No. 6,257,883 (the ‘883 Patent), claims 1-22 of U.S. Patent No. 5,913,680 (the ‘680 Patent), and claims 1-15 of U.S. Patent No. 5,474,445 (the ‘445 Patent).

In determining whether a nonstatutory basis exists for a double patenting rejection, it must be determined whether any claim in the application defines an invention that is merely an obvious variation of an invention claimed in the reference. See MPEP § 804. The analysis used in an obviousness-type double patenting rejection parallels the guidelines for analysis of a 35 U.S.C. § 103 obviousness determination. *In re Braat*, 937 F.2d 589, 19 USPQ2d 1289 (Fed. Cir. 1991). According to the MPEP, § 804 II.B.1, in making an obviousness-type double patenting rejection, the rejection should make clear the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is an obvious variation of the invention defined in a claim in the patent. It is respectfully submitted that the Office Action relies upon unsupported allegations that the inventions defined in the present application would have been recognized by one of ordinary skill in the art.

The Office Action does not provide any factual basis as to why one of ordinary skill in the art would conclude that the inventions defined in at least independent claims 41, 48 and 54 are obvious variants. Namely, no factual basis was given as to why orthodontic brackets including the following features are obvious variants of the claimed inventions to one of ordinary skill in the art.

- An orthodontic bracket including a locking shutter positioned between the tie wings and the tie wings forming a labial surface with a notch formed therein, as recited in independent claim 41.
- An orthodontic bracket including a locking shutter positioned between the tie wings with the end of the locking shutter positioned in the archwire slot when the shutter is closed and the end of the locking shutter including a labial surface that is concave about a mesio-distal axis, as recited in independent claim 48.

- An orthodontic bracket including a locking shutter positioned between the tie wings with the end of the locking shutter positioned in a notch of the archwire slot when the shutter is closed, as recited in independent claim 54.

Because no factual basis was given for why a person of ordinary skill in the art would conclude that the invention defined in the claims at issue are obvious variations of the invention defined in a claim of the cited patents, it is respectfully submitted that claims 41-57 and 59 of the present application are not obvious variants of claims 1-13 of the '883 Patent, claims 1-22 of the '680 Patent, and claims 1-15 of the '445 Patent. Accordingly, withdrawal of the obviousness-type double patenting rejection is respectfully requested.

35 U.S.C. § 102(b) Rejections

Claims 41-57 and 59 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,634,662 (Rosenberg). Applicant takes note of Figure 5 from Rosenberg that is reproduced in the Office Action.

Claims 41-47 require at least two tie wings coupled to a body of a self-ligating bracket and defining a space therebetween. The tie wings form a labial surface having a notch formed therein. One example of a notch is shown in FIG. 7 and is identified by reference numeral 150. Rosenberg does not teach, suggest or disclose a body and tie wings collectively forming a labial surface having a notch formed therein. The Examiner identifies a "notch" in Figure 5 of Rosenberg that is actually a space between the tie wings 2. Claim 41 recites a space defined between at least two tie wings and a notch formed in the labial surface of the tie wings. The tie wings 2 of Rosenberg form a labial surface that is flat. As seen in Figure 5, no notch is formed in the labial surface of the Rosenberg tie wings 2. Therefore, Rosenberg cannot anticipate claims 41-47 of the present application, and allowance of those claims is respectfully requested.

Claims 48-53 require a self-ligating bracket having a locking shutter positioned between the tie wings, wherein the end of the locking shutter is positioned in the archwire slot when the shutter is closed, and further wherein the end of the locking shutter includes a labial surface that is concave about an axis that is parallel to a mesio-distal axis. As discussed above, support for a “mesio-distal axis” is found in the specification of the present application and is supported by FIGS. 6-11 of the present application. Mesial and distal are terms of art in the field of orthodontics. Any orthodontist would understand that “mesio-distal axis” refers to an axis that extends between the mesial and distal ends of a device.

The Examiner relies upon a Dentistry dictionary rather than an Orthodontic dictionary to allege the term “mesio-distal” has not been defined. Further, the Examiner relies upon a definition of “mesial,” but neglects to refer to a definition of “distal.” In *The American Heritage Stedman’s Medical Dictionary* (2002, 2001, 1995), cited at www.dictionary.com, “mesial” is defined as “situated toward the middle of the front of the jaw along the curve of the dental arch.” “Distal” is defined as “situated farthest from the middle and front of the jaw, as a tooth or tooth surface.” A reading of the specification, analysis of an Orthodontic dictionary, or reference to a definition for both “mesial” and “distal” shows that “mesio-distal axis” is an axis that extends between the mesial and distal ends of a device, or jaw.

Rosenberg does not teach, suggest or disclose a locking shutter including an end positioned in the archwire slot when the shutter is in the closed position or the end including a labial surface that is concave about mesio-distal axis. Rosenberg discloses the lever 5 with springs 8, 8' attached to the end of the lever 5 seat the archwire 6 in the slot 7. The end of the lever 5 includes a labial surface that is linear. The springs 8, 8' include a labial surface that is concave about a gingival-occlusal axis, but the labial surface of the springs is not concave about a mesio-distal surface as required by claim 48. Therefore, Rosenberg cannot anticipate

claims 48-53 of the present application, and allowance of those claims is respectfully requested.

Claims 54-57 and 59 are directed to a self-ligating bracket having a locking shutter positioned between the tie wings, wherein an end of the locking shutter is positioned in a notch in the archwire slot when the shutter is closed. Rosenberg does not teach, suggest or disclose an archwire slot including a notch, or a shutter including an end positioned in the notch when the shutter is in the closed position. The lever 5 of Rosenberg is movable to allow access to the archwire 6 and to prevent access to and hold the archwire 6 in place. As seen in FIG. 2 of Rosenberg, the slot 7 does not include a notch, nor, is the lever 5 or the springs 8, 8' positioned within a notch formed in the slot 7. Rather, the lever 5 is spaced apart from the archwire 6 and an inner perimeter of slot 7. Therefore, Rosenberg cannot anticipate claims 54-57 and 59 of the present application, and allowance of those claims is respectfully requested.

In view of the remarks and amendments presented herein, Applicant believes that the claims as filed are in condition for allowance and respectfully requests a timely Notice of Allowance be issued for this case. The undersigned is available for telephone conference.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Gayle A. Bush". The signature is fluid and cursive, with the first name "Gayle" being more prominent.

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